

Global Leader

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HYUNDAI ROBOT SERIES










 **HYUNDAI** | ROBOTICS DIVISION
HEAVY INDUSTRIES








Hyundai Robot Series

Model					
		HA006A	HA006L	HH010L	
Payload		6 kg	6 kg	10 kg	
Max. Reach		1,425 mm	1,994 mm	1,964 mm	
Degree of freedom		6 Axes	6 Axes	6 Axes	
Installation		Floor / Wall / Ceiling	Floor / Wall / Ceiling	Floor / Wall / Ceiling	
Max. Motion Range	S	Swivel	±172 °	±185 °	±185 °
	H	For/Backward	+180 ° ~ -78 °	+195 ° ~ -70 °	+195 ° ~ -70 °
	V	Up/Downward	+180 ° ~ -82 °	+180 ° ~ -80 °	+180 ° ~ -80 °
	R2	Rotation 2	±180 °	±195 °	±195 °
	B	Bending	±135 °	±135 °	±135 °
	R1	Rotation 1	±360 °	±360 °	±360 °
Max. Speed	S	Swivel	230 °/s	190 °/s	190 °/s
	H	For/Backward	230 °/s	180 °/s	180 °/s
	V	Up/Downward	230 °/s	190 °/s	190 °/s
	R2	Rotation 2	430 °/s	380 °/s	380 °/s
	B	Bending	430 °/s	430 °/s	380 °/s
	R1	Rotation 1	640 °/s	640 °/s	600 °/s
Allowable Moment	R2	Rotation 2	1.2 kgf.m	4.0 kgf.m	2.5 kgf.m
	B	Bending	1.0 kgf.m	1.0 kgf.m	2.5 kgf.m
	R1	Rotation 1	0.6 kgf.m	0.6 kgf.m	1.1 kgf.m
Repeatability		±0.04 mm	±0.06 mm	±0.06 mm	
Ambient Temperature		0~45°C(273~318K)	0~45°C(273~318K)	0~45°C(273~318K)	
Approximate Weight		150 kg	224 kg	230 kg	
Max. Rated Power		4.4 kVA	4.4 kVA	4.4 kVA	
Controller Model		Hi5a	Hi5a	Hi5a	
Option			Wrist IP54	Wrist IP67	
Application	Arc Welding		●	●	●
	Spot Welding				
	Handling		●	●	●
	Sealing		●	●	●
	Others				


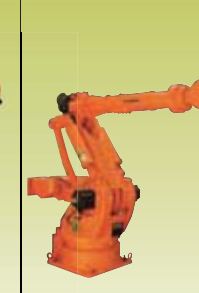

High Speed

						
HH020	HH020L	HH030L	HH050	YS080	YS100A	HH100SL
20 kg	20 kg	30 kg	50 kg	80 kg	100 kg	100 kg
1,742 mm	3,281 mm	2,535 mm	2,239 mm	2,239 mm	2,239 mm	3,507 mm
6 Axes	6 Axes	6 Axes	6 Axes	6 Axes	6 Axes	6 Axes
Floor / Wall / Ceiling	Floor / Wall / Ceiling	Floor / Wall / Ceiling	Floor / Wall / Ceiling	Floor / Wall / Ceiling	Floor / Wall / Ceiling	Shelf
±185°	±180°	±180°	±180°	±180°	±180°	±180°
+195° ~ -70°	+180° ~ -65°	+180° ~ -65°	+180° ~ -65°	+180° ~ -65°	+180° ~ -65°	+125° ~ -70°
+180° ~ -80°	+180° ~ -80°	+180° ~ -80°	+180° ~ -80°	+180° ~ -80°	+180° ~ -80°	+190° ~ -80°
±195°	±195°	±360°	±360°	±360°	±360°	±360°
±135°	±135°	±125°	±125°	±125°	±125°	±125°
±360°	±360°	±360°	±360°	±360°	±360°	±360°
190°/s	175°/s	150°/s	175°/s	170°/s	150°/s	105°/s
180°/s	175°/s	140°/s	175°/s	140°/s	130°/s	85°/s
190°/s	180°/s	150°/s	175°/s	160°/s	140°/s	95°/s
380°/s	360°/s	250°/s	250°/s	230°/s	200°/s	170°/s
380°/s	380°/s	250°/s	250°/s	230°/s	200°/s	155°/s
600°/s	600°/s	350°/s	350°/s	350°/s	300°/s	270°/s
4 kgf.m	4 kgf.m	20.4 kgf.m	22 kgf.m	40.8 kgf.m	50 kgf.m	105 kgf.m
4 kgf.m	4 kgf.m	20.4 kgf.m	22 kgf.m	40.8 kgf.m	50 kgf.m	105 kgf.m
2 kgf.m	2 kgf.m	10.2 kgf.m	15 kgf.m	20.4 kgf.m	25 kgf.m	50 kgf.m
±0.06 mm	±0.08 mm	±0.08 mm	±0.06 mm	±0.06 mm	±0.06 mm	±0.15 mm
0~45°C(273~318K)	0~45°C(273~318K)	0~45°C(273~318K)	0~45°C(273~318K)	0~45°C(273~318K)	0~45°C(273~318K)	0~45°C(273~318K)
225 kg	535 kg	650 kg	645 kg	645 kg	645 kg	1,450 kg
4.4 kVA	4.4 kVA	8 kVA	8 kVA	8 kVA	8 kVA	8 kVA
Hi5a	Hi5a	Hi5a	Hi5a	Hi5a	Hi5a	Hi5a
Wrist IP67	Wrist IP67	Wrist IP67	Wrist IP67	Wrist IP67	Wrist IP67	
●						
				●	●	●
●	●	●	●	●	●	●
●	●	●				
Press Handling		Press Handling	Press Handling			Press Handling

High Reliability

						
HH130L	YS140	HS160L	HP160	HS165S	HS165D	HS180 / HS220
130 kg	140 kg	160 kg	160 kg	165 kg	165 kg	180 kg 220 kg
3,082 mm	2,339 mm	3,036 mm	3,128 mm	3,090 mm	1,350 mm	2,666 mm
6 Axes	6 Axes	6 Axes	4 Axes	6 Axes	6 Axes	6 Axes
Floor	Floor	Floor	Floor	Shelf	Floor	Floor
±180°	±180°	±180°	±180°	±180°	±170°	±180°
+155° ~ +10°	+180° ~ -60°	+180° ~ -65°	+135° ~ -10°	+125° ~ -70°	+160° ~ -30°	+155° ~ +10°
+190° ~ -80°	+230° ~ -150°	+230° ~ -135°	+75° ~ -65°	+190° ~ -80°	+90° ~ -60°	+190° ~ -80°
±360°	±360°	±360°	-	±360°	±360°	±360°
±125°	±125°	±130°	-	±130°	±130°	±128°
±360°	±360°	±360°	±360°	±360°	±360°	±360°
105 %/s	140 %/s	95 %/s	130 %/s	105 %/s	100 %/s	120 %/s
85 %/s	110 %/s	95 %/s	120 %/s	105 %/s	90 %/s	115 %/s 105 %/s
95 %/s	120 %/s	95 %/s	120 %/s	105 %/s	90 %/s	125 %/s 115 %/s
170 %/s	165 %/s	150 %/s	-	150 %/s	150 %/s	185 %/s 145 %/s
155 %/s	165 %/s	145 %/s	-	145 %/s	145 %/s	175 %/s 145 %/s
270 %/s	250 %/s	220 %/s	300 %/s	220 %/s	220 %/s	265 %/s 220 %/s
105 kgf.m	70 kgf.m	105 kgf.m	-	105 kgf.m	100 kgf.m	110 kgf.m 145 kgf.m
105 kgf.m	70 kgf.m	105 kgf.m	-	105 kgf.m	100 kgf.m	110 kgf.m 145 kgf.m
50 kgf.m	35 kgf.m	50 kgf.m	50 kgf.m	50 kgf.m	50 kgf.m	58 kgf.m 79 kgf.m
±0.15 mm	±0.06 mm	±0.15 mm	±0.2 mm	±0.06 mm	±0.06 mm	±0.06 mm
0~45°C(273~318K)	0~45°C(273~318K)	0~45°C(273~318K)	0~45°C(273~318K)	0~45°C(273~318K)	0~45°C(273~318K)	0~45°C(273~318K)
1,400 kg	670 kg	985 kg	1,495 kg	1,540 kg	810 kg	955 kg
8 kVA	8 kVA	8 kVA	8 kVA	8 kVA	8 kVA	8 kVA
Hi5a	Hi5a	Hi5a	Hi5a	Hi5a	Hi5a	Hi5a
●	●	●	●	●	●	●
●	●	●	●	●	●	●
Press Handling			Palletizing			

Wide Working Envelope

					
HS200S	HS200L	HH300	HX300L	HX400	HX400S
200 kg	200 kg	300 kg	300 kg	400 kg	400 kg
3,090 mm	3,070 mm	2,666 mm	3,056 mm	2,573 mm	3,106 mm
6 Axes	6 Axes	6 Axes	6 Axes	6 Axes	6 Axes
Shelf	Floor	Floor	Floor	Floor	Shelf
±180°	±180°	±180°	±180°	±180°	±180°
+125° ~ -70°	±75°	±75°	+165° ~ +15°	+165° ~ +15°	+95° ~ -50°
+190° ~ -80°	+30° ~ -125°	+30° ~ -125°	+60° ~ -70°	+60° ~ -70°	+60° ~ -70°
±360°	±360°	±360°	±360°	±360°	±360°
±125°	±120°	±120°	±120°	±120°	±120°
±360°	±360°	±360°	±360°	±360°	±360°
95°/s	95°/s	95°/s	95°/s	95°/s	85°/s
95°/s	95°/s	95°/s	95°/s	95°/s	85°/s
95°/s	95°/s	95°/s	95°/s	95°/s	85°/s
135°/s	120°/s	110°/s	100°/s	100°/s	100°/s
120°/s	120°/s	110°/s	100°/s	100°/s	100°/s
190°/s	180°/s	180°/s	160°/s	160°/s	160°/s
136 kgf.m	131.5 kgf.m	170 kgf.m	170 kgf.m	200 kgf.m	200 kgf.m
136 kgf.m	131.5 kgf.m	170 kgf.m	170 kgf.m	200 kgf.m	200 kgf.m
72 kgf.m	61.6 kgf.m	70 kgf.m	70 kgf.m	84 kgf.m	84 kgf.m
±0.06 mm	±0.2 mm	±0.15 mm	±0.2 mm	±0.15 mm	±0.2 mm
0~45°C(273~318K)	0~45°C(273~318K)	0~45°C(273~318K)	0~45°C(273~318K)	0~45°C(273~318K)	0~45°C(273~318K)
1,595 kg	1,223 kg	1,250 kg	2,685 kg	2,620 kg	2,910 kg
8 kVA	10.5 kVA	10.5 kVA	10.5 kVA	10.5 kVA	10.5 kVA
Hi5a	Hi5a	Hi5a	Hi5a	Hi5a	Hi5a
●	●	●	●	●	●
●	●	●	●	●	●

Robot Application



Car body line in China



Car body line in Czech



Arc welding robot



Inspection robot system



Handling robot for press line



Spot welding robot for train

Controller Specifications

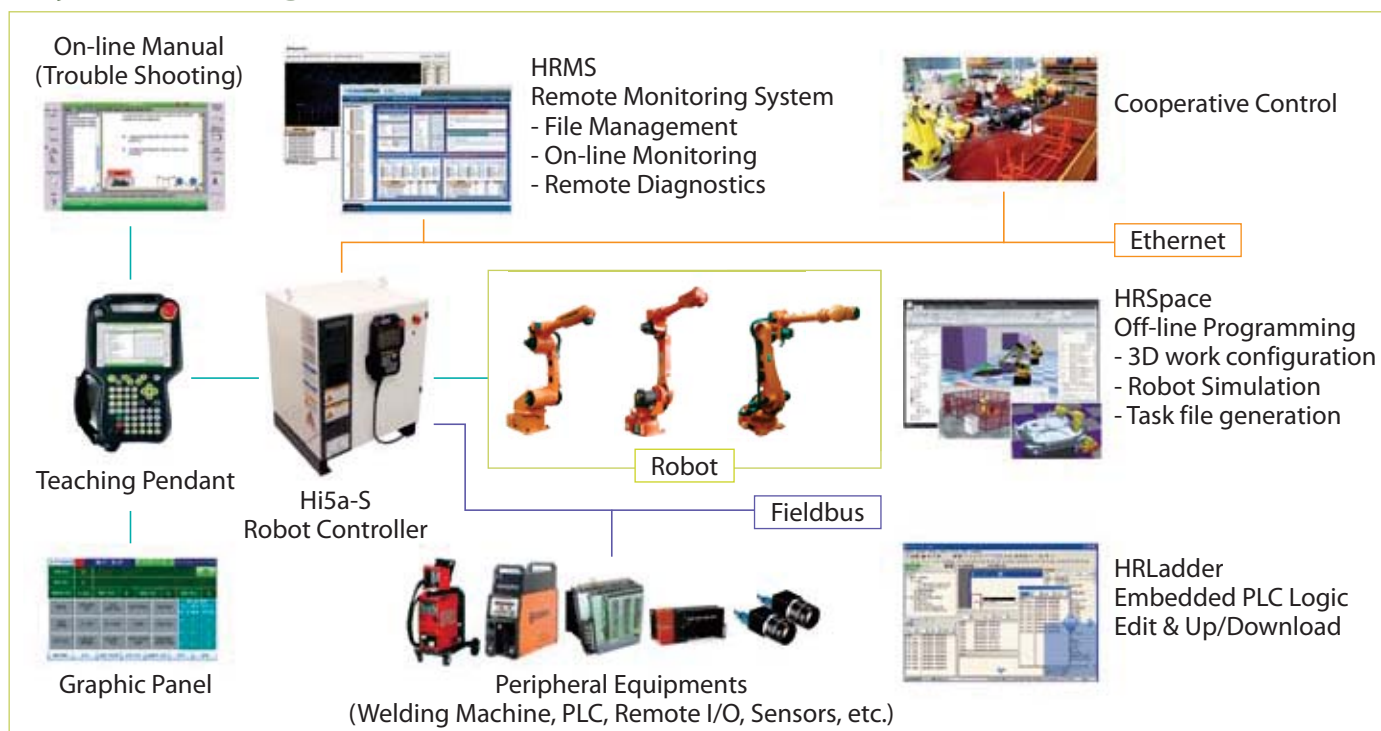
Items	Specifications
Model Name	Hi5a-S
Operating Mode	Teaching & Playback
Interpolation	Point-to-Point, Linear, Circular
Max. Axes	Max. 16 axes simultaneously
Number of Steps	4MB (max. 21,000 steps)
External Program Selection	Binary 255 / Discrete 8
Position Detector	Serial Absolute Encoder
Program Back-up	USB Memory
Servo Drive System	Full Digital Servo
Digital Input / Output	Max. 256 / 256
Analog Input / Output	8 / 8
Conveyor Pulse Counter	Differential & Open Collector Type
User / Machine Interface	2 x Ethernet (100 Base-T) 2 x RS232C/RS422 1 x USB (for backup, version-up) 2 x CAN (1 option) 1 x SD Card
Fieldbus(option)	PROFINET IO-Controller / IO-Device EtherNet/IP Scanner / Adapter DeviceNet Master / Slave PROFIBUS-DP Master / Slave CC-Link Slave (V1.10, V2.0) MODBUS (Serial)
Rated Supply Voltage	3Φ AC220V±10%, 50/60Hz
Max. Rated Power	8kVA (Instant Max. 30kVA)
Size	700mm x 900mm x 630mm
Environment	IP Class: IP54 Ambient Temperature: 0°C~45°C Relative Humidity: 20~95%, Non-condensing

Teaching Pendant Specifications

Items	Specifications
Model Name	TP520
Operating System	Windows CE
Display	7" Color TFT-LCD / Touch Panel
Operating Mode	Menu Driven and Code Input

- Robot tasks are programmed in easy language similar to BASIC.
- Advanced control technologies are applied, such as path-invariant motion planning, dynamic model based control and vibration suppression control.
- Provides reliable maintenance methods for maximizing availability by on-line manual and remote monitoring system.
- Reduces installation time and increases productivity with powerful S/W tools on PC like HRSpace, HRLadder, etc.
- Supports various fieldbus and communication solutions to adapt any manufacturing environment.
- Complies with ISO 10218-1:2011, ANSI/RIA15.6:2012 safety standards.

System Configuration





Off-Line Programming

Simulate and create robot applications in your office

- ROBCAD Interface
- Teaching Pendant Interface
- File Up / Down Load
- RCS (Robot Control Simulation)
- ROBCAD/DM - Works/PS/
PowerMill Interface



Certificate (ISO 9001, ISO 14001, QS-9000TE, CE, NRTL)



Republic of Korea

Head Office

1000 Bangeojin sunhwan-doro, Dong-gu, Ulsan, Korea
TEL : +82 52 202 7901 / FAX : +82 52 202 7900
E-mail: machinery@hhi.co.kr

Jungbu Office

981, Seodong-daero, poeung-eup, pyeongtaek-si,
Gyeonggi-do
TEL : +82 31 684 4295 / FAX : +82 31 683 4947

Daegu Office

223-5, Beomeo 2-dong, Suseong-gu, Daegu
TEL : +82 53 746 6232~3 / FAX : +82 53 746 6231

Gwangju Office

415-2, Nongseong-dong, Seo-gu, Gwangju
TEL : +82 62 363 5272 / FAX : +82 62 363 5273

Overseas

Chicago, U.S.A

955 Estes Avenue, Elk Grove Village IL
60007, U.S.A
TEL : +1 800 423 8721
FAX : +1 847 437 3574

Houston, U.S.A

1400 Broadfield, Suite 110, Park 10 Center
Houston, Texas 77084, U.S.A
TEL : +1 281 578 7097
FAX : +1 281 578 8317

London, U.K

2nd Floor, The Triangle 5-17,
Hammersmith Grove London W6 0LG, U.K
TEL : +44 20 8741 0501
FAX : +44 20 8741 5620/8834 7281

Rotterdam, Netherland

Folkert Elsingastraat 7
3067 NW, Rotterdam, The Netherland
TEL : +31 10 212 1567
FAX : +31 10 212 5134

Shanghai, China

Room 802, South Area Shenhong
International Building, #1500 Shenkun
Road Shanghai, China
TEL : +86 21 3357-5888
FAX : +86 21 3357-5808

Beijing, China

RECRO INTERNATIONAL CENTRE A
Tower- 1101, No.8 Wangjing
Donglu,Chaoyang District, Beijing, China
TEL : +86 10 8417-7788
FAX : +86 10 8417-7718

Mumbai, India

5th Floor, East Quadrant, The IL & FS
Financial Centre Plot no. C-22, G-Block,
Bandra-Kurla Complex Bandra (E), Mumbai
400-051, India
TEL : +91 22 2653 3420~26
FAX : +91 22 2653 3429~30